

Providing Information to the Water Well, Underground Injection Control (UIC) & Underground Hydrocarbon Storage (UHS) Industries in Kansas and other Partners Interested in these Operations, the Environment, Water Resources and Energy

Inside this Issue

Bureau of Water Announces New Bureau Director	1
Seminar/Training Dates	1
GWTS Staff Changes	2
Pam Chaffee, Water Well & Technical Support	3
Water Well Testing	3
Natural Gas Release in California	4
Our Water Resources	5
2016 KGWA Annual Convention/Tradeshow	6
Brandy DeArmond, PG.	6
NEW WWC5 & WWC-5P Forms	7
Water Well Renewal Process	8
Office Holiday Closings	9
Web News	9
Did You Know	9
KDHE Staff	10

Spring 2016

Bureau of Water Announces New Bureau Director by John Mitchell, Director, Division of Environment

I am pleased to announce that Jaime Gaggero has been appointed as the Director of the Bureau of Water. This appointment was effective March 27, 2016.

Jaime holds a Bachelor's degree in Environmental Policy and a Master's Degree in Public Administration, both from the University of Kansas. Jaime began her work with the Bureau of Water in 2000. Jaime has served as the Chief of the Watershed Management Section overseeing the Clean Water Act Section 319 Program, the Kansas Watershed Restoration and Protection Strategy Program, the 401 Water Quality Certification Program, the Local Environmental Protection Program, the Local Conservation Lending Program, and Source Water Protection.

Jaime is an active member of the Association of Clean Water Administrators (ACWA) and currently serves as the Chair of the Nonpoint Source Pollution Workgroup.

Please help me welcome Jaime into her new role.

Save these Dates

**Geology & Well Technology
Fall 2016 Training and Seminar**

**September 7-8, 2016
Wichita, Kansas**

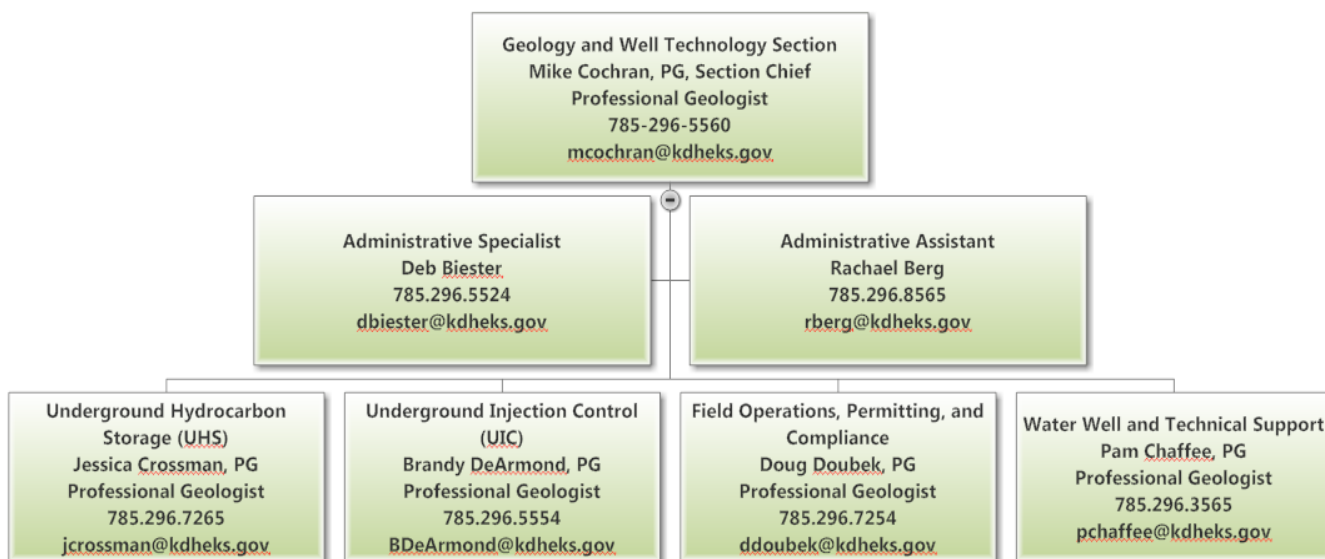
Geology & Well Technology Staff Changes in 2016

by Deb Biester

NEW EMPLOYEES:

Brandy DeArmond, Unit Chief, Underground Injection Control
Rachael Berg, Administrative Assistant

GEOLOGY AND WELL TECHNOLOGY SECTION



Water Well Program - Spring 2016 Reminders

by Pam Chaffee, P.G.

PERMITS

The water well contractor should make sure all necessary permits have been issued prior to constructing, reconstructing, or plugging a water supply well.

The Division of Water Resources (DWR) in the Kansas Department of Agriculture, requires application for a permit to divert or take water for any use, except domestic use only. Examples of permits required from DWR include (a) appropriation (all uses except domestic), (b) term (specified period of time greater than six (6) months – typically for dewatering of large construction projects and remediation projects), and (c) temporary (six (6) months or less for oil/gas well drilling and temporary dewatering projects). Information on permit application and water use reporting can be obtained from the DWR website at: <http://agriculture.ks.gov/divisions-programs/dwr>.

The Kansas Department of Health and Environment, Bureau of Water (KDHE/BOW) requires permits for injection of water into the subsurface, and disposing of water to the land surface. A permit to operate a public water supply well will only be provided after construction details and water quality of the well have been approved by KDHE/BOW and a water right has been secured from DWR. Local entities, such as groundwater management districts, local environmental protection groups, counties, and municipalities, may also require permits prior to construction, reconstruction, and plugging of wells. Information is available at various program webpages on the KDHE/BOW website at: <http://www.kdheks.gov/water/index.html>.

Please use current versions of water well forms to report construction/reconstruction and plugging, to transfer ownership, and to request inactive status. They are available on the Water Well Program webpage at: <http://www.kdheks.gov/waterwell/index.html>, under Forms. See related article in this newsletter.

GROUTING INTERVAL

Constructed and reconstructed water wells must be sealed by grouting the annulus for a depth of at least 20 feet or at least five (5) feet into the first clay or shale interval, if present, whichever is greater. This interval should begin at the ground surface or the pitless well adaptor/unit. If groundwater is encountered at a depth less than this minimum, the grouting interval may be modified to meet local conditions. Water from two or more aquifers must be separated from each other by sealing the annulus between the aquifers with grout.

LEGAL DESCRIPTION OF WELL LOCATION

As required in *Article 12 - Groundwater Exploration & Protection Act*, the legal description of a constructed, reconstructed, or plugged water well must be provided on the WWC-5 and WWC-5P forms. Accurate location information is critical to protect the health and general welfare of Kansas citizens and protect groundwater resources from waste and potential pollution. The U.S. Public Land Survey System (PLSS), utilizes townships, ranges, sections and quarter fractions to identify the legal location of surveyed land. The PLSS and online computer tools to convert an address or geographic coordinates (latitude & longitude) to a legal location will be the topic of the KDHE/BOW/Geology & Well Technology Section's Fall 2016 Training & Seminar on Wednesday afternoon, September 7th, at the Sedgwick County Extension Education Center, 21st and Ridge Road, Wichita, Kansas.

Water Well Testing

KDHE Certified Laboratories Listing can be found at the following website:

<http://www.kdheks.gov/envlab/disclaimer.html>



Natural Gas Release in California

by Mike Cochran, PG

KDHE has been following the natural gas release that occurred in a natural gas storage well located at the Aliso Canyon natural gas storage facility in California. This incident has seen considerable coverage by the media due to impacts and the potential impacts to the public health and the environment. Fortunately, the leaking well was successfully plugged recently, stopping the leaking of natural gas into the environment.

As a result of this significant incident, the Federal Pipeline and Hazardous Materials Safety Administration (PHMSA) issued an Advisory to the natural gas storage well operators addressing the storage of natural gas. This advisory reminds operators of underground natural gas storage facilities to consider the overall integrity of the facilities to ensure the safety of the public and operating personnel and to protect the environment. The advisory recommends that operators review their operations to identify the potential of facility leaks and failures caused by corrosion, chemical damage, mechanical damage, or other material deficiencies in piping, tubing casing, valves and associated facilities. Furthermore, operators are reminded of importance of reviewing location and operations of shut-off and isolation systems and reviewing and updating emergency plans as necessary.

The advisory describes the recent and ongoing natural gas release from the Aliso Canyon natural gas storage well located in California and several historic incidents including the natural gas release that occurred in 2001 at the Yaggy natural gas storage facility near Hutchinson, Kansas.

The advisory is essentially a checklist evaluation that operators of natural gas storage systems/facilities should conduct and consider when assessing the integrity and potential vulnerabilities of their systems.

Even though this advisory is directed toward the storage of natural gas, using salt caverns for the storage of liquids has similarities. KDHE believes the recommendations of this advisory are applicable to and should also be considered by operators of liquid hydrocarbon salt cavern storage facilities operating here in Kansas, which are regulated by KDHE.

Section II of the PHMSA Advisory Bulletin states: *"Operators must adhere to applicable state regulations for the permitting, drilling, completion, and operation of storage wells."* Recommendation #3 of the Advisory Bulletin, states in part: *"The operator's selection and usage of leak detection technology should take into consideration detection limits for natural gas and liquids, response time, reproducibility, accuracy, distance from source, background lighting conditions, geography, and meteorology."*

Additionally, one of the recommendations states *"Periodic usage of the appropriate well log evaluations (such as corrosion, cement bond, temperature, noise, caliper and other appropriate assessment logs for integrity evaluations of the production casing and tubing strings) to determine well integrity, mitigation measures, and reassessment intervals to maintain the pressure rating and flow isolation characteristics of the well for all downhole pipe, cement, and any other isolation equipment."*, as part of a corrosion monitoring and integrity evaluation program. Other recommendations address the detection and monitoring of corrosion.

The Advisory Bulletin emphasizes conducting risk evaluations regularly and periodically at the storage operations and facilities. Similarly, KDHE believes very strongly in risk evaluation of operations and facilities.

KDHE has requested that Kansas hydrocarbon salt cavern storage operators review the twelve PSMHA recommended actions listed in the PHMSA Advisory Bulletin that could also be applicable to liquid salt cavern storage operations and to advise KDHE of the results of their review.

KDHE believes its current regulatory program for the storage of hydrocarbons in salt caverns; which industry has done an excellent job of complying with; is protective of the public health, safety, property and the environment, but KDHE also believes it prudent to periodically step back and review operations.

Think About it – Our Water Resources

by Mike Cochran, P.G.

I feel many of us still take our safe drinking water supply for granted. Our water is relatively cheap in cost and unlimited in supply it seems. This is not the case in many parts of the world. Many people in the world must walk miles to obtain fresh, clean drinking water. Sometimes making the trip 3 or 4 or even more times per day. The charity World Vision reports that about 1,000 children die every day in the poorer parts of the world due to the lack of clean drinking water.

As this situation I have described demonstrates, water is precious. Our water resources must be protected. The programs administered by the KDHE Geology & Well Technology Section, as well as the many other programs within KDHE, are designed and implemented to protect public health, safety, property and the environment. That is the charge of each KDHE staff member. Of course, protection of water resources is a significant part of this charge.

We all must continue to work together to protect our water resources from waste and contamination. One method is to consider our water resources when carrying out activities. That is, plan activities such that they are conducted in a manner protective of the water resource and also conserves the water resource.

KDHE continues to work with the regulated community to achieve maximum protection of our water resources. KDHE appreciates the efforts of all to accomplish protection of our water resources and the continued progress that is being made in this endeavor.



Keeping our water clean as seen through the eyes of Adyson Clubine a 4th grader.

Adyson was a featured artist in the Kansas Department of Health & Environment, Bureau of Waste Management "Keep It Clean Kansas Calendar Contest".

2016 KGWA Annual Convention & Tradeshow

by Mike Cochran, PG

On January 21-22, 2016, the Geology and Well Technology Section, Bureau of Water, participated in the 2016 Kansas Ground Water Association Annual Convention & Expo. KGWA is an association of KDHE licensed water well contractors, water well equipment suppliers and water consultants. The Section maintained an information booth describing the Section's Programs and activities that were viewed by convention participants. KDHE Water Well Program information was also made available. Section staff members Pam Chaffee and Mike Cochran made presentations on water well requirements and an update of Section activities related to various types of wells. Pam Chaffee provided in conjunction with KGWA administrative staff, training for the KDHE Water Well Contractors license exam. The license exam was then administered to 12 contractors. Section staff also attended a number of relevant presentations by a variety of water well experts and viewed the equipment and displays in the exposition hall.

Brandy DeArmond, P.G. New to the Underground Injection Control Program

By Brandy DeArmond, P.G.

I recently joined the Geology & Well Technology Section in KDHE's Bureau of Water as the new Underground Injection Control (UIC) Unit Chief. I am a licensed Professional Geologist in the State of Kansas.

Most recently, I worked in the Storage Tank Section of KDHE's Bureau of Environmental Remediation for seven and a half years, where I focused on remediation of petroleum sites that had impacted Public Water Supply or domestic wells. I worked closely with other KDHE staff, consultants, city officials, and homeowners in order to treat Public and private water supplies while concurrently overseeing the remediation of the contamination source.

For the four years prior to coming to KDHE, I was a consultant in the environmental field in both Colorado and Florida, where I conducted oversight of the installation of hundreds of monitoring wells, sampled for multiple contaminants in groundwater, surface water, soil, and sediment, and was involved in the remediation of petroleum products and chlorinated solvents in rail yards, former wood treatment facilities, and dry cleaning facilities.

I obtained both my bachelor's and master's degree in Geology in the Sunshine State, my master's degree research at the University of Florida, focusing on Radium-226 accumulation in Florida lake sediments. During my undergraduate years, I worked as a research and teaching assistant at the University of South Florida, and was also a Hydrologic Aide for the USGS in Tampa, where I participated in spring flow measurements, regional groundwater measuring events, and researched Florida's Intermediate Aquifer System.

I am eager to explore a different facet of the environmental field and look forward to working with everyone.



ATTENTION WATER WELL CONTRACTORS and Individuals who submit WWC-5 or WWC-5P Forms

by Deb Biester, Administrative Specialist

KDHE will **no longer** be providing printed hard copies of the WWC-5 and WWC-5P forms. You will be able to submit these forms by using:

1. **KOLAR (Kansas On-Line Automated Reporting) system (if you are a licensed Kansas Water Well Contractor), or**
2. By filling out the .pdf fillable forms on our Web site and mailing to KDHE.

Both can be found at: <http://www.kdheks.gov/waterwell/index.html>

NOTE: PLEASE RECYCLE ALL FORMS YOU MAY HAVE IN YOUR OFFICE OR HOUSE. THE PREVIOUS FORMS DO NOT CONTAIN ALL OF THE INFORMATION NEEDED FOR THE KGS DATABASE. NEW FORMS ARE ON OUR WEB SITE LISTED ABOVE.

If you do not have a computer, please call us at 785-296-5524 and request a copy of the form(s) and we will print off and mail to you. You may reproduce these forms for future submittals.

Please submit WWC-5 or WWC-5P forms as follows:

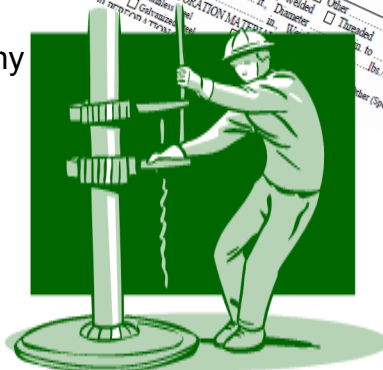
1. **One** white copy to KDHE at:

KDHE, GWTS
1000 SW. JACKSON STREET, STE. 420
TOPEKA, KS 66612-1367

2. One copy to water well owner
3. One copy for your files

There is a \$5.00 fee for each water well constructed and your check should accompany the WWC-5 form(s) when submitted.

There is no fee for Re-constructed wells and plugged wells.



Water Well Contractor License Renewal Process (Things to Remember for 2016-2017)

by Deb Biester, Administrative Specialist

Water Well Contractor License Renewals are handled by Kansas Department of Health and Environment (KDHE), Bureau of Water (BOW), Geology & Well Technology Section (GWTS) located at 1000 SW Jackson Street, Ste. 420, Topeka, KS 66612, 785-296-5524, dbiester@kdehks.gov. The Water Well Program Web page is located at: <http://kdheks.gov/waterwell/index.html>.

About May 15th of each year, a renewal letter, Renewal Application (Form WWC-1R), and a Rig Application (Form WWC-3), are mailed out by KDHE informing water well contractors it is time to renew their license(s).

KDHE regulations K.A.R. 28-30-3(b) require the following:

- (1) Each licensee shall submit an application for renewal of license and drill rig registrations before July 1 of each year by filing the proper renewal forms provided by the department and by meeting the following requirements:
 - (A) Paying the annual license fee (\$100) and a drill rig registration fee (\$25.00) for each drill rig to be operated in the state;
 - (B) filing all records for each water well constructed, reconstructed, or plugged by the licensee in accordance with K.A.R. 28-30-4 during the previous licensure period; (first page of WWC-1R)
 - (C) filing a report, on a form approved by the department, of all approved continuing education units earned by the licensee or designated person during the previous licensure period;
 - (D) meeting the continuing education requirements in subsection (c); and
 - (E) providing any remaining outstanding information or records requested that existed before the issuance or revocation of a license.
- (2) Failure to comply with the requirements of this subsection shall be grounds to revoke the existing license and terminate the license renewal process.

KDHE regulations K.A.R. 28-30-3(c) and (d) further require: Continuing education requirements. Each water well contractor or the contractor's designated person shall earn at least eight units of continuing education approved by the secretary. This requirement shall apply each year beginning with the first full year of licensure [July 1 – June 30] or the renewal period. One unit of continuing education shall equal 50 minutes of approved instruction except for trade shows and exhibitions, which shall be counted as one unit for each approved trade show or exhibition attended. Employment requirements. If the designated person who has passed the water well contractor examination under paragraph (a)(3) (A) leaves the contractor's employment, the contractor shall employ a designated person who shall take, within 90 days, and be required to pass the water well contractor examination.

CEU's are handled by the Kansas Ground Water Association (KGWA). Executive Director, Dale Hayse, can be reached at Hayse Management Services, P.O. Box 107, Mullinville, KS 67109, phone 620-548-2669, email Haysemgmt@Havilandtelco.com. KGWA web site: <http://kgwa.org>.

In mid-June, the KGWA provides KDHE a list of water well contractors who have completed the required 8 CEUs. Upon receipt of the CEU list, the Renewal Application and fee (\$100.00) and the Rig Renewal Application and fee(s) (\$25.00 per each rig), a license will be issued and mailed out as soon as possible.

If KDHE does not receive the required items by July 1, your license will be subject to revocation.

Events where CEUs can be earned are posted on the KGWA web site and the KDHE Water Well Program web page, both shown above. Contact Dale Hayse, for information on qualifying and reporting CEUs.

Note: Please be sure to sign the Renewal Application and list your drillers on Form WWC-1R, complete the Drilling Rig License Application, and attach your signed check. Otherwise they will be returned to you causing a delay in issuing your license(s). Mail to KDHE/BOW at the address above.

Do not mail your CEUs and CEU fees to KDHE. Mail to Dale Hayse at the above address for Hayse Management Services.

If you need further help with renewing your Kansas Water Well Contractor license, please contact Deb Biester at 785-296-5524.

KDHE OFFICE CLOSINGS FOR THE REMAINING 2016 CALENDAR YEAR

Monday, May 30—Memorial Day
Monday, July 4—Independence Day
Monday, September 5—Labor Day
Friday, November 11—Veterans Day
Thursday, November 24—Thanksgiving
Friday, November 25—Thanksgiving
Monday, December 26—Christmas

Web News

The following changes have recently been made to the Geology and Well Technology Section Web site:

Geology (<http://kdheks.gov/geo>)

Updated Index Page
Updated Organizational Chart

UHS (<http://kdheks.gov/uhs>)

Updated Index Page

UIC (<http://kdheks.gov/uic>)

Updated Index Page

Water Well (<http://kdheks.gov/waterwell>)

Updated Index Page
Updated Active KS Water Well Contractor List
Updated Contractor Exam Locations/Contacts
Updated Water Well License Exam Rules
(More changes coming soon)

Did You Know... ???

From the United Nations World Water Development Report: (2014)

- ♦ 20% of the world's aquifers are being over exploited,
- ♦ Since the late 1980s, total peak water withdrawals have increased by 1% per year,
- ♦ 768 million people remain without access to an improved source of water,
- ♦ and about 2 billion people do not have access to safe water.



**KANSAS
DEPARTMENT OF
HEALTH AND
ENVIRONMENT**

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<http://kdheks.gov/geo>



UNDERGROUND NEWS

**Kansas Department of
Health and Environment**

**Prepared & Distributed by
Bureau of Water - Geology & Well Technology Section**

**Direct inquiries and opinions to:
KDHE - BOW
Underground News
1000 SW Jackson, Suite 420
Topeka, KS 66612-1367**

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MEMBER:



***KDHE's Mission is to Protect and Improve the
Health and Environment of all Kansans***